CLAIMS

1. A method for the linearisation of a wide frequency band power amplifier, a method wherein:
the frequency band of operation of the amplifier is divided into at least two groups or subbands ,
the instantaneous frequency of each sampled input signal is measured in order to determine the group or subband to which it belongs and,
predistortions are applied to the input signal, these predistortions depending on the frequency group.

2. A method according to claim 1, wherein the frequency dependent predistortions are provided by a set of look-up tables, the number of look-up tables being equal to the number of frequency subbands, a look-up table containing, for each amplitude of the input signal, two correction values representing the amplitude and the phase of a predistortion.

3. A method according to claim 1, wherein the predistortion values are calculated by using coefficients of a polynom of which the variable is the amplitude of the input signal.

4. A method according to claim 1, wherein the instantaneous frequency of the sampled input signal is calculated by the derivative of the phase of this input signal.

5. A method according to claim 4, wherein the instantaneous frequency of the sampled input signal is calculated by the substraction of the phases of two successive samples.

6. A method according to claim 1, wherein the input sampled signals are represented by their rectangular coordinates in a complex plane and in that the rectangular coordinates are converted into polar coordinates, the phase being used to determine the frequency group and the amplitude being used to determine the predistortion values in the frequency group.

7. A method according to claim 1, wherein the accuracy of measurement of the instantaneous frequency is lower than the accuracy of the input signal.

8. A method according to claim 1, wherein the predistortion values or coefficients are periodically updated by measuring the effect of input test or regular signals on the output signal of the amplifier and by calculating the predistortion values or coefficients based on this measurement.

9. Application of a method according to Claim 1, to the linearisation of the power amplifier of a transmitter.

10. A transmitter including a power amplifier linearised by means of a method according to ~~any of claims 1 to 8,~~ *Claim 1* wherein said transmitter transmits CDMA signals.

11. A transmitter including a power amplifier linearised by means of a method according to ~~any of claims 1 to 8,~~ *Claim 1* wherein said transmitter comprises a coherent receiver which is used for the updating of predistortion values or coefficients.

12. Application of the method according to claim 8 to a station comprising a transmitter with a power amplifier to be linearised and a receiver, wherein the receiver is used for measuring the output of the power amplifier for updating predistortion values or coefficients.